GE
159 Plastics Avenue
Pittsfield, MA 01201
USA

Transmitted Via Overnight Courier

November 2, 2005

Mr. William P. Lovely, Jr. (MC HBO)
USEPA – New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site
Former Oxbow Areas J and K (GECD420)
Supplemental Sampling Plan

Dear Mr. Lovely:

In March 2005, the General Electric Company (GE) submitted a *Conceptual Removal Design/Removal Action Work Plan for Former Oxbow Areas J and K* (Conceptual RD/RA Work Plan). For the non-residential properties/averaging areas at the Former Oxbow Areas J and K Removal Action Area (RAA), that work plan evaluated whether the existing concentrations of polychlorinated biphenyls (PCBs) and other constituents in the soil would meet the soil-related Performance Standards set forth in the Consent Decree (CD) and *Statement of Work for Removal Actions Outside the River* (SOW) for the applicable type of non-residential property or averaging area (i.e., commercial or recreational). Where existing conditions would not meet those standards, the Conceptual RD/RA Work Plan proposed soil removal/replacement actions to achieve those standards. That work plan was approved by the U.S. Environmental Protection Agency (EPA) on June 14, 2005. Subsequently, on September 13, 2005, GE submitted a *Final Removal Design/Removal Action Work Plan for Former Oxbow Areas J and K* (Final RD/RA Work Plan), which provided additional details regarding the proposed remediation to achieve those standards.

Since that time, based on further review of the available soils data, GE has determined that a number of the non-residential properties within this RAA may already meet the soil-related Performance Standards that would apply to residential properties or could potentially achieve those standards with relatively small modifications to the RD/RA work plans. Achieving the residential Performance Standards at such properties would avoid the need to obtain a Grant of Environmental Restriction and Easement (ERE) or to implement a Conditional Solution at those properties. However, the application of the residential Performance Standards to these non-residential properties requires additional sampling for PCBs on the sampling grid that is required for residential properties at the Former Oxbow Areas under the SOW. Accordingly, to evaluate whether such properties may already achieve the residential Performance Standards and, if not, the extent of remediation or additional remediation necessary to do so, GE is submitting this supplemental sampling plan for certain properties within the RAA.

This supplemental sampling plan pertains to the following non-residential properties within this RAA (shown on Figure 1):

- Parcel K10-13-1 (including adjacent portions of undeveloped Longview Terrace and the Zeno Street right-of-way);

- Parcel K10-12-1 (including adjacent portions of undeveloped Longview Terrace and the Zeno Street right-of-way);
- Parcel K10-11-5;
- Parcel K10-10-3;
- Parcel K10-10-4; and
- The portion of Parcel K10-10-33 within this RAA.

For these properties, GE proposes to conduct supplemental sampling so as to allow an evaluation of whether existing soil conditions meet the residential Performance Standards established in the CD. If not, these additional data would support possible evaluations by GE concerning the extent of additional soil removal that would be necessary to achieve those standards. For purposes of such evaluations (following the completion of the supplemental sampling activities), GE proposes to evaluate each of the above-listed parcels as one averaging area, rather than dividing some of them into commercial and recreational portions, as was done in the Conceptual and Final RD/RA Work Plans. Those divisions were previously made to allow application of the separate Performance Standards for commercial and recreational areas. However, for application of the residential Performance Standards, there is no need for such divisions, since those standards would apply to the overall parcel if it were ever converted to residential use.

The SOW requires PCB sampling of residential properties at the Former Oxbow Areas on a 25-foot grid for the top foot of soil and a 50-foot grid for soil deeper than one foot (SOW, Technical Attachment D, p. 7). Accordingly, such grids have been superimposed on the above-listed properties, starting with the grids previously used in the pre-design investigation of this RAA. These grids are shown on Figure 2.

Although the SOW states that samples from the top foot at residential properties should be collected from the 0- to 0.5-foot and 0.5 to 1-foot depth intervals, GE previously proposed, for residential properties at Former Oxbow Areas J and K, to collect surface samples from the 0- to 1-foot depth increment (as stated in GE's Pre-Design Investigation Work Plan for this RAA), and that approach was approved by EPA by letter dated November 19, 2002. Consistent with that approved approach, GE proposes to collect samples from the 0- to 1-foot depth increment at all of the 25-foot grid nodes on the above-listed properties where such surface samples were not previously collected. These additional sampling locations are identified on Figure 2. These samples will be submitted for PCB analysis.

In addition, GE proposes to advance soil borings at all nodes on the 50-foot grid nodes on these properties where borings were not previously advanced for the collection of subsurface samples. These additional soil boring locations are also shown on Figure 2. At each of these boring locations, in addition to the collection of surface samples from the 0- to 1-foot depth increment (at locations where surface samples were not previously collected), subsurface samples will be collected, beginning at one foot below the ground surface (bgs), to a depth of 15 feet. Although the SOW states that subsurface samples at residential properties should be collected in two-foot depth intervals, GE proposes, for these particular properties, to collect the subsurface samples from depth increments of 1 to 3 feet, 3 to 6 feet, 6 to 10 feet, and 10 to 15 feet for two reasons: (1) for consistency with the existing subsurface pre-design PCB data from these properties (which were generally collected in those depth increments); and (2) because the existing subsurface PCB data from these properties show very low PCB concentrations, averaging less than 1 ppm at each property. These samples will be submitted for PCB analysis. For each property, all the existing and new PCB data from depth increments below one foot will be averaged, using the spatial averaging procedures specified in the SOW, to determine the average PCB concentration in the 1- to 15-foot depth increment for purposes of applying the residential Performance Standard of 2 ppm.

With respect to the non-PCB constituents listed in Appendix IX of 40 CFR Part 264 (excluding pesticides and herbicides) plus three additional constituents – benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3), the applicable requirement in the SOW for sampling residential properties at the Former Oxbow Areas calls for the analysis of a minimum of three Appendix IX+3 samples per property. This requirement has already been met at all the above-listed properties. Hence, no additional general characterization sampling for non-PCB constituents is necessary at these properties to meet the SOW's sampling requirement for residential properties.

GE has also reviewed the existing Appendix IX+3 data from these properties to determine whether there are specific data needs to support the evaluation of whether these properties would meet the Performance Standards for residential properties. For each such property, GE has: (a) compared the maximum concentrations of dioxin Toxicity Equivalency Quotients (TEQs) in the 0- to 1-foot and 1- to 15-foot depth increments to the CD's Performance Standard for such TEQs at residential areas (1 ppb); and (b) compared the average concentrations of the other non-PCB constituents (which were not screened out) in each of those depth increments to the "Wave 2" Method 1 S-1 soil standards proposed by the Massachusetts Department of Environmental Protection (MDEP) in September 2004 (as modified in May 2005), which are expected to be finalized prior to the performance of the remediation at this RAA. Based on that review, GE has identified specific non-PCB data needs at two properties:

- At Parcel K10-13-1, elevated concentrations of antimony and lead were found in the 1- to 3-foot sample and the 3- to 6-foot sample at location RAA15-E2 (see Figure 3). GE has already conducted delineation sampling for these constituents around the 1- to 3-foot sample at that location; and in the Conceptual RD/RA Work Plan, GE proposed to remove the soil associated with that sample and showed that such remediation would result in achievement of the applicable Performance Standards for non-PCB constituents in soil at commercial properties. However, that removal is not sufficient to allow the average concentrations of antimony and lead in the 1- to 15-foot depth increment to meet the Wave 2 Method 1 S-1 soil standards for those constituents, which would apply to a residential property. Accordingly, to support a possible evaluation of the extent of additional removal that would be necessary to meet those standards, GE proposes to conduct additional sampling for antimony and lead at locations around RAA15-E2. Specifically, GE proposes to collect four samples from the 1- to 3-foot and 3- to 6-foot depth increments at locations surrounding the previous delineation samples, as shown on Figure 3, for analysis of antimony and lead.

- At Parcel K10-12-1, the Conceptual RD/RA Work Plan demonstrated that no remediation is necessary to meet the applicable Performance Standards for non-PCB constituents at non-residential areas. However, review of the data indicates that the existing average concentrations of certain carcinogenic polycyclic aromatic hydrocarbons (PAHs) in the 1- to 15-foot depth increment would exceed the Wave 2 Method 1 S-1 soil standards for those constituents. Further examination of those data indicates that that exceedance is driven primarily by the results from the 3- to 6-foot sample at location RAA15-G4, in which PAHs were not detected but where the PAH results had a very high detection limit, such that use of one-half the detection limit (7 ppm) in the averaging calculations increased the average concentrations. Accordingly, GE proposes to collect another sample from the 3- to 6-foot depth increment at location RAA15-G4, as shown on Figure 3, and to submit that sample for analysis of semi-volatile organic compounds (which include PAHs) in an effort to obtain a lower detection limit for PAHs. The results from that sample will allow a potential re-evaluation of whether the average PAH concentrations at this property meet the applicable soil standards for residential properties.

Following receipt of EPA approval of this supplemental sampling plan, GE proposes to conduct the supplemental PCB and non-PCB sampling described above, and to submit an Addendum to the Final RD/RA Work Plan, which will: (a) report the results of that supplemental sampling; (b) identify those non-residential properties where GE proposes to achieve the Performance Standards for residential properties; (c) for such properties that would meet those standards without additional remediation, demonstrate such achievement; and (d) for such properties where GE elects to perform additional soil removal to achieve those standards, propose the horizontal and vertical limits of such removal and demonstrate that that additional remediation would result in achievement of residential standards. GE proposes to complete the supplemental sampling and to submit that Addendum within three months after EPA approval of this supplemental sampling plan (subject to delays occasioned by winter weather conditions).

Please call me if you have any questions or comments regarding this proposal.

Sincerely,

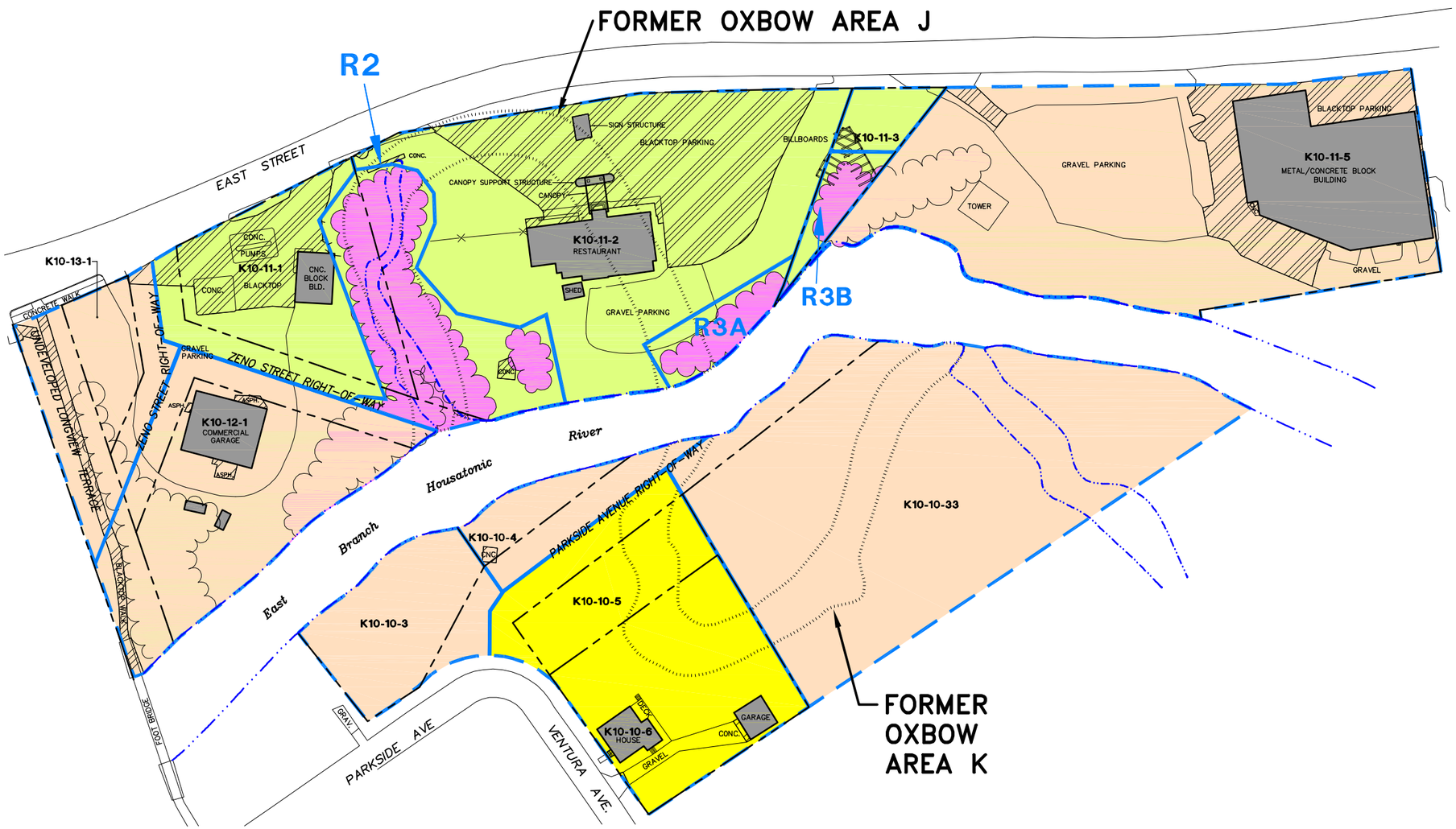
Richard W. Gates, DAJ

Richard W. Gates
Remediation Project Manager

Attachments
V:\GE_Pittsfield_CD_Former_Oxbow_Areas_J_and_K\Reports and Presentations\Supplemental Sampling\65652196Ltr.doc

cc: Dean Tagliaferro, EPA
Tim Conway, EPA
John Kilborn, EPA
Holly Inglis, EPA
Rose Howell, EPA*
Linda Palmieri, Weston
K.C. Mitkevicius, USACE
Susan Steenstrup, MDEP (2 copies)
Anna Symington, MDEP*
Robert Bell, MDEP*
Thomas Angus, MDEP*
Nancy E. Harper, MA AG*
Dale Young, MA EOEA*
Mayor James Ruberto, City of Pittsfield*
Michael Carroll, GE*
Andrew Silfer, GE
Rod McLaren, GE*
James Nuss, BBL
James Bieke, Goodwin Procter LLP
Property Owner - Parcel K10-11-5
Property Owner – Parcel K10-12-1
Property Owner – Parcel K10-13-1
Property Owner – Parcel K10-10-3
Property Owner – Parcel K10-10-4
Property Owner – Parcel K10-10-33
Richard Drennan, Esq.
Emil George, Esq.
Public Information Repositories
GE Internal Repository

* *without attachments*



LEGEND:

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY (EXCLUDING ACTUAL RIVERBANK AREAS)
- RD/RA AVERAGING AREA BOUNDARY
- PROPERTY LINE
- K10-10-6 PROPERTY ID
- R2 RECREATIONAL AREA ID
- EDGE OF WATER
- PAVED ROADWAY
- VEGETATION
- STREAMS WITH INTERMITTENT FLOW
- FORMER OXBOW/LOW-LYING AREA
- PROPERTIES SUBJECT TO SUPPLEMENTAL SAMPLING (NON-GE-OWNED)
- RECREATIONAL AREA (NON-GE-OWNED)
- COMMERCIAL PROPERTY (NON-GE-OWNED)
- RESIDENTIAL PROPERTY
- BUILDING OR PERMANENT STRUCTURE
- PAVED AREA

0 100' 200'

GRAPHIC SCALE

GENERAL NOTES:

1. BASE MAP MODIFIED FROM SURVEY DRAWINGS NOs. GE-1080-1 (6/25/04) AND GE-1080-3 (11/18/04) BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, INC. AND FROM PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990.
2. EASEMENTS AND PROPERTY LINES DIGITIZED FROM COPIES OF CITY OF PITTSFIELD TAX ASSESSORS MAPS AND ARE APPROXIMATE.
3. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.

GENERAL ELECTRIC COMPANY
PITTSFIELD MASSACHUSETTS

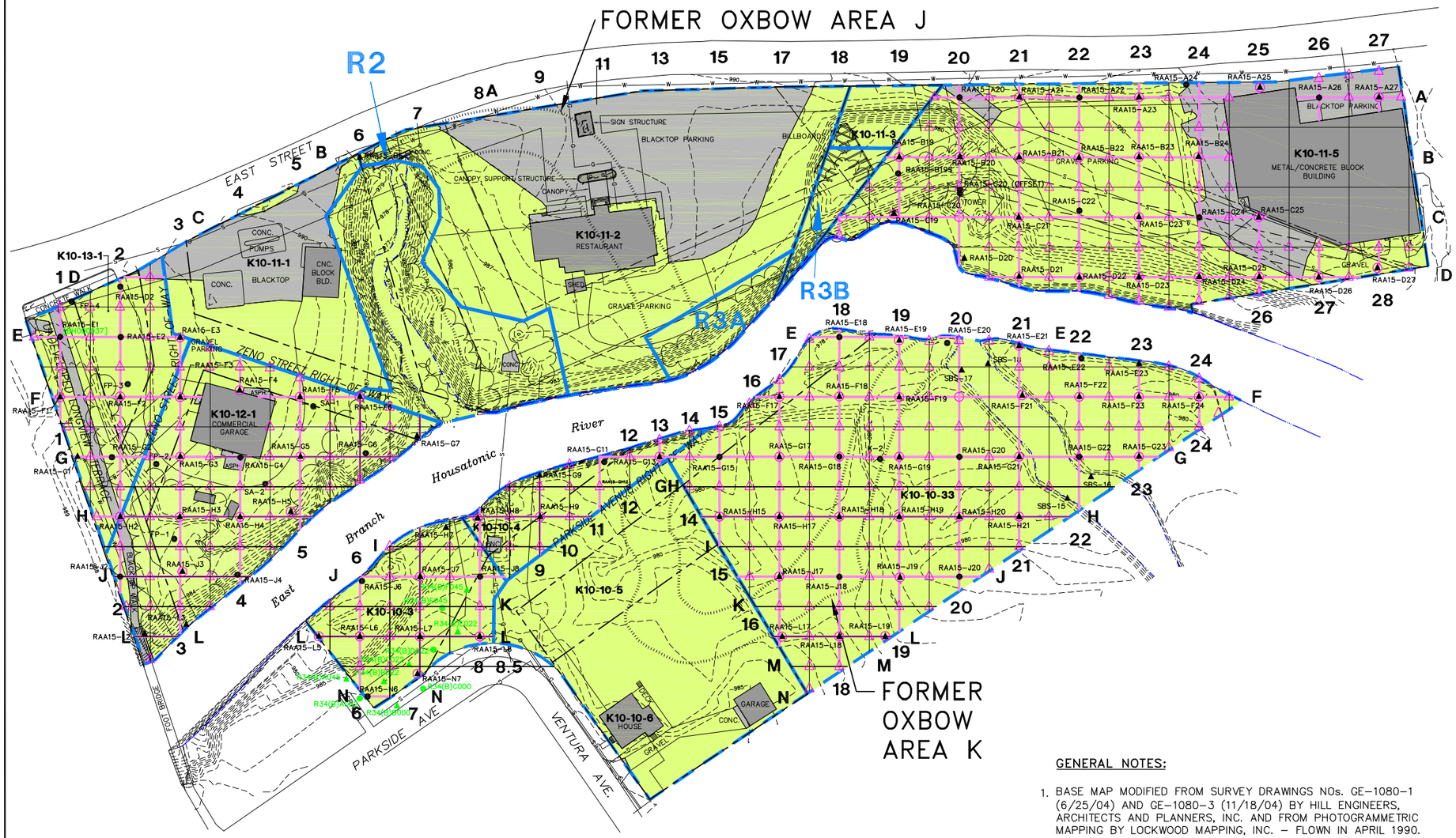
SUPPLEMENTAL SAMPLING PLAN FOR FORMER OXBOW AREAS J AND K

SITE MAP

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 1

X: 20639X01.DWG
L: ON=*, OFF=*REF, |CONT-*, |EASE-25, PAVED-SH, |SHD-ESMT, |UNPAVED-SH, *|U-*, *|ROW*
P: PAGESET/SYR-BL
11/02/05 SYR-85-DMW BGP RLP
N/20639003/SUB/20639G09.DWG



LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- RD/RA AVERAGING AREA BOUNDARY
- PROPERTY LINE
- K10-10-6 PROPERTY ID
- R2 RECREATIONAL AREA ID
- WESTERN MASS. ELECTRIC CO. EASEMENT
- SEWER EASEMENT
- STREAMS WITH INTERMITTENT FLOW
- PROPOSED SOIL BORING LOCATION (1–TO 3–FT, 3–TO 6–FT, 6–TO 10–FT, AND 10–TO 15–FT DEPTH INCREMENTS)
- PROPOSED SURFACE SOIL SAMPLE LOCATION (0–TO 1–FT INCREMENTS)
- ▲ FP–1 EXISTING SURFACE SOIL SAMPLE LOCATION
- ● YB–3 EXISTING SOIL BORING LOCATION
- ▲ R34(B)C022 EXISTING EPA SURFACE SOIL SAMPLE LOCATION
- ● R34(B)C000 EXISTING EPA SOIL BORING LOCATION
- [BH000937] EXISTING EPA SPLIT SAMPLE LOCATION
- 980 INDEX ELEVATION CONTOUR
- INTERMEDIATE ELEVATION CONTOUR
- APPROXIMATE FORMER OXBOW/LOW–LYING AREA
- BUILDING OR PERMANENT STRUCTURE
- PAVED AREA
- UNPAVED AREA
- S APPROXIMATE SEWER LOCATION
- D D APPROXIMATE STORM DRAIN LOCATION
- W APPROXIMATE WATER MAIN LOCATION
- G G APPROXIMATE GAS LINE LOCATION
- 50–FOOT PCB SAMPLING GRID
- 25–FOOT PCB SAMPLING GRID

GENERAL NOTES:

1. BASE MAP MODIFIED FROM SURVEY DRAWINGS NOs. GE–1080–1 (6/25/04) AND GE–1080–3 (11/18/04) BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, INC. AND FROM PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990.
2. EASEMENTS AND PROPERTY LINES DIGITIZED FROM COPIES OF CITY OF PITTSFIELD TAX ASSESSORS MAPS AND ARE APPROXIMATE.
3. FORMER RIVER CHANNEL AND OXBOW/LOW–LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
4. UTILITY LOCATIONS ARE APPROXIMATE, AND ALL UTILITIES MAY NOT BE SHOWN.
5. SAMPLE LOCATIONS WERE SURVEYED BY BLASLAND, BOUCK & LEE, INC. OR HILL ENGINEERS, ARCHITECTS AND PLANNERS. HISTORICAL LOCATIONS ARE APPROXIMATE.
6. (OFFSET) REFERS TO ADDITIONAL DRILLING LOCATION NEEDED BECAUSE OF EQUIPMENT REFUSAL AT INITIAL BORING.

0 100' 200'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

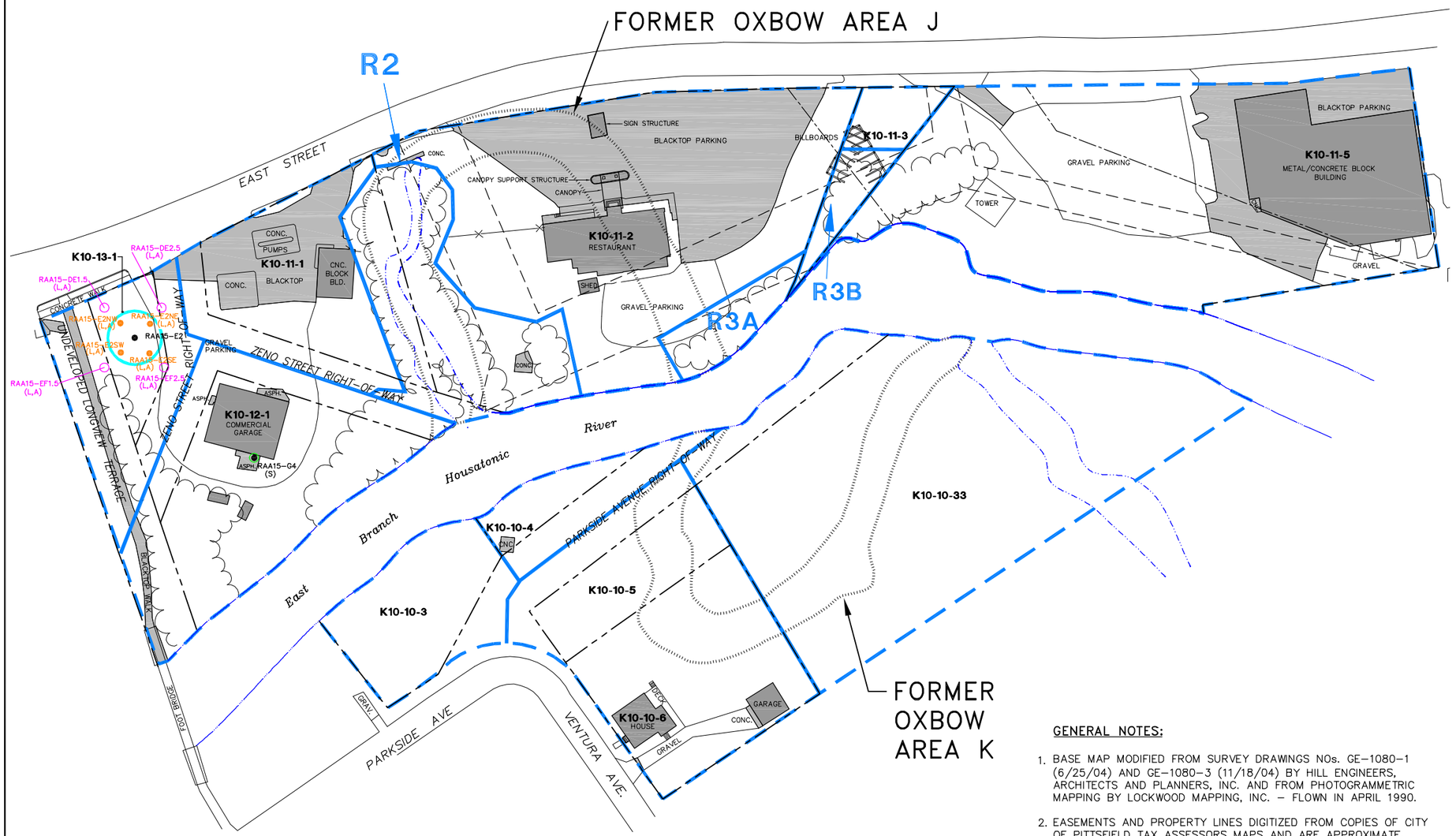
SUPPLEMENTAL SAMPLING PLAN FOR FORMER OXBOW AREAS J AND K

PROPOSED & EXISTING PCB SOIL SAMPLE LOCATIONS

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 2

X: 20639X01, X02.DWG
L: ON=*, OFF=*REF
P: PAGESET/SYR–DL
11/02/05 SYR–85–DMW BGP RLP
N/20639003/SUB/20639G03.DWG



LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- RD/RA AVERAGING AREA BOUNDARY
- PROPERTY LINE
- K10-10-6 PROPERTY ID
- R2 RECREATIONAL AREA ID
- WESTERN MASS. ELECTRIC CO. EASEMENT
- SEWER EASEMENT
- STREAMS WITH INTERMITTENT FLOW
- RAA15-E2 EXISTING SOIL BORING LOCATION
- RAA15-E2SW EXISTING DELINEATION SOIL BORING
- NON-PCB SAMPLE LOCATIONS SUBJECT TO REMOVAL
- PROPOSED SUPPLEMENTAL NON-PCB SOIL SAMPLE (1-TO 3-FT AND 3-TO 6-FT DEPTH INTERVALS)
- PROPOSED SUPPLEMENTAL NON-PCB SOIL SAMPLE (1-TO 3-FT DEPTH INTERVAL)
- APPROXIMATE FORMER OXBOW/LOW-LYING AREA
- BUILDING OR PERMANENT STRUCTURE
- PAVED AREA

GENERAL NOTES:

1. BASE MAP MODIFIED FROM SURVEY DRAWINGS NOs. GE-1080-1 (6/25/04) AND GE-1080-3 (11/18/04) BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, INC. AND FROM PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. - FLOWN IN APRIL 1990.
2. EASEMENTS AND PROPERTY LINES DIGITIZED FROM COPIES OF CITY OF PITTSFIELD TAX ASSESSORS MAPS AND ARE APPROXIMATE.
3. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
4. UTILITY LOCATIONS ARE APPROXIMATE, AND ALL UTILITIES MAY NOT BE SHOWN.
5. SAMPLE LOCATIONS WERE SURVEYED BY BLASLAND, BOUCK & LEE, INC. OR HILL ENGINEERS, ARCHITECTS AND PLANNERS. HISTORICAL LOCATIONS ARE APPROXIMATE.
6. WHERE INDICATED, EXISTING AND PROPOSED NON-PCB SAMPLES HAVE BEEN OR WILL BE ANALYZED FOR THE FOLLOWING:

   L,A = LEAD AND ANTIMONY ONLY
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

0 100' 200'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SUPPLEMENTAL SAMPLING PLAN FOR FORMER OXBOW AREAS J AND K

SUPPLEMENTAL NON-PCB SOIL SAMPLE LOCATIONS

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 3

X: 20639X01.DWG
L: ON=*, OFF=*REF, *|CONT-, |EASE-25, |SHD-ESMT, |UNPAVED-SHD, |REC-BOUNDARY
P: PAGESET/SYR-DL
11/02/05 SYR-85-DMW BGP RLP
N/20639003/SUB/20639D04.DWG